CONTRACT AWARD	STATE OF ALASKA HQ, STATE EQUIPMENT FLEET (Contracting Authority) 2200 E. 42nd Avenue Anchorage, Alaska 99508 (907-269-0800)	CONTRACT AWARD NUMBER 1606558

ORDERING DEPARTMENT	COMMODITY CODE	DATE OF CONTRACT
HEADQUARTERS, STATE EQUIPMENT FLEET 2200 E. 42ND AVENUE ANCHORAGE, ALASKA 99508		1/2/06
	NUMBER & PERIOD OF RENEWAL OPTIONS NONE	PR NO./DATE ASSIGNED
	DATE INITIAL CONTRACT BEGINS 1/2/06	DATE INTIAL CONTRACT ENDS 1/1/09

CONTRACTOR ADDRESS: YUKON EQUIPMENT 2020 E. 3RD AVENUE ANCHORAGE, AK 99501	GS VENDOR CODE:
	ISSUED IN ACCORDANCE WITH BID # SEF- 1057 DATED: 1/2/06
	PRICE ADJ. REQ. PRIOR TO EACH RENEWAL:
CONTACT NAME: ROGER MORRIS	CPI/PPI BASE INDEX POINTS & MO/YR:
	REVIEW DATE: RENEWALS EXPIRE (MO/YR):
TELEPHONE NUMBER: 277-1541	ESTIMATED VALUE OF INITAL TERM: REBID:

SEND INVOICES IN DUPLICATE TO: DOT&PF, STATE EQUIPMENT FLEET, 2200 E. 42ND AVENUE, ANCHORAGE AK 99508

NOTE: This order constitutes a binding commitment between the State and the contractor listed hereon. Unauthorized modification without the expressed prior approval of the contracting authority will result in a financial obligation on the contractor and/or unauthorized State personnel making the change.

DESCRIPTION

3-YEAR CONTRACT TO PURCHASE
SNOW BLOWERS, 4X4 CARRIER MOUNTED, LOT #4

CONTRACTING OFFICER
LYNDA W. SIMMONS
(907) 269-0788

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SECTION

CONTRACTING AUTHORITY NAME & TITLE	SIGNATURE
LYNDA SIMMONS, CONTRACTING OFFICER III	

TELEPHONE NO.: 907-269-0793 FAX NO.: 907-269-0801

IMPORTANT 1. Contract award number and ordering department name must appear on all invoices and documents relating to this order.
2. The State is registered for tax free transactions under Chapter 32, IRS Code Registration No. 92-601185. Items are for the exclusive use of the State and not for resale.

SECTION I

STANDARD TERMS AND CONDITIONS

1.0 ACCESSORIES: When accessories are supplied, they must be certified to be compatible with the rest of the equipment. Certification will be written evidence satisfactory to the State that the accessories are compatible.

2.0 ALTERATIONS: The contractor must obtain the written approval from the contracting officer prior to making any alterations to the specifications contained in this contract. The State will not pay for alterations that are not approved in advance and in writing by the Contracting Officer.

3.0 AMENDMENTS: Contract terms shall not be waived, altered, modified, supplemented or amended without prior written approval of the Contracting Officer.

4.0 ASSIGNMENT: A contractor may not assign any portion of this contract unless authorized in advance and in writing by the Contracting Officer.

5.0 COMPLIANCE WITH ALL GOVERNMENT REGULATIONS: The contractor must comply with all applicable federal, state, and borough regulations, codes, and laws, and pay all applicable federal, state, and borough taxes, and is liable for all required insurance, licenses, permits, and bonds. Failure to comply with such requirements shall constitute a breach of contract and shall be grounds for contract cancellation. Damages or costs resulting from noncompliance shall be the sole responsibility of the contractor.

6.0 CONFLICT OF INTEREST: A person employed by the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if they are an employee of the administrative unit that supervises the award of this contract or they have the power to take or withhold official action to affect the contract.

7.0 CONTRACT PERIOD: From the date of award for three years (36 months). There are no options to renew.

8.0 DEFAULT: In case of contractor default, the State may procure the goods or services from another source and hold the contractor responsible for any resulting excess costs and may seek other remedies under law or equity. Alaska Statutes and Regulations provide for suspension and disbarment of non-responsible contractors.

9.0 DELIVERY: All deliveries shall be F.O.B. final destination point with all transportation and handling charges paid by contractor. Responsibility and liability for loss or damage shall remain with the contractor until final inspection and acceptance when responsibility shall pass to the State except as to latent defects, fraud and the contractor's warranty obligations.

10.0 DISCONTINUED ITEMS: In the event an item is discontinued by the manufacturer during the life of the contract, another item may be substituted, provided that the Contracting Officer makes a written determination that it is equal or better than the discontinued item and provided that it is sold at the same price or less than the discontinued item.

11.0 DISPUTES: Any disputes arising out of this contract shall be resolved under the laws of Alaska. An appeal or any original action to enforce any provision of this agreement must be in the superior court for the First Judicial District of Alaska.

12.0 FORCE MAJEURE (Impossibility to perform): Neither party to this contract shall be held responsible for delay or default caused by acts of God and/or war, which is beyond that party's reasonable control. The State may terminate this contract upon written notice after determining such delay or default will reasonably prevent successful performance of the contract.

13.0 INDEMNIFICATION: The contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the contractor under this agreement. The contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the contractor and the independent negligence of the contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. “Contractor” and “contracting agency”, as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term “independent negligence” is negligence other than in the contracting agency’s selection, administration, monitoring, or controlling of the contractor and in approving or accepting the contractor’s work.

14.0 INSPECTIONS: Goods furnished under this contract are subject to inspection and test by the State at times and places determined by the State. If the State finds goods furnished to be incomplete or not in compliance with contract specifications, the State may reject the goods and require the contractor to either correct them without charge or deliver them at a reduced price, which is equitable under the circumstances. If the contractor is unable or refuses to correct such goods within a time deemed reasonable by the State, the State may cancel the order in whole or in part. Nothing in this paragraph shall adversely affect the State's rights as buyer, including all remedies and rights granted by Alaska statutes.

15.0 INSURANCE:

15.1 Without limiting the contractor's indemnification, it is agreed that the contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, nonrenewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

15.2 Proof of insurance is required for the following:

15.2.1 Workers' Compensation Insurance: The contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

15.2.2 Commercial General Liability Insurance: covering all business premises and operations used by the contractor in the performance of services under this agreement with minimum coverage limits of $300,000 combined single limit per occurrence.

15.2.3 Commercial Automobile Liability Insurance: covering all vehicles used by the contractor in the performance of services under this agreement with minimum coverage limits of $300,000 combined single limit per occurrence.

15.3 Failure to supply satisfactory proof of insurance within the time required will cause the State to declare the contractor non-responsive and to reject the contract.

16.0 ITEM UPGRADES: The State reserves the right to accept upgrades to models on the basic contract when the upgrades improve the way the equipment operates or improve the accuracy of the equipment. Such upgraded items must be at the same price as the items in the basic contract.

17.0 NEW EQUIPMENT: Equipment offered must be new equipment. New equipment means equipment that is currently in production by the manufacturer and is still the latest model, edition or version generally offered. The equipment must be warranted as new by the manufacturer and may not have been used for any purpose, other than display (not demonstration), prior to its sale to the State. The State will not accept remanufactured, used or reconditioned equipment, including used or reconditioned components or parts of. It is the contractor's responsibility to ensure that each piece of equipment delivered to the State complies with this requirement. A contractor's failure to comply with this requirement will cause the State to seek remedies under breach of contract.

18.0 PAYMENT: Payment for agreements under $500,000 for the undisputed purchase of goods or services provided to a State agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement, which establishes a lower interest rate or precludes the charging of interest.

19.0 QUANTITIES: The State reserves the right to reduce or increase the quantity of items ordered under any contract.

20.0 SEVERABILITY: If any provision of this contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected.

21.0 SHIPPING DAMAGE: The State will not accept or pay for damaged goods. The contractor must file all claims against the carrier(s) for damages incurred to items in transit from the point of origin to the ultimate destination. The State will provide the contractor with written notice when damaged goods are received.

22.0 STANDARD AND SPECIAL TERMS AND CONDITIONS: The terms and conditions of this section are standard to State of Alaska, Department of Transportation and Public Facilities, Statewide Equipment Fleet contracts for the purchase of goods. There may also be other special terms and conditions in an Invitation to Bid or Request for Proposal which apply only to this contract. In the event of a conflict between the standard and special terms and conditions, the Special Terms and Conditions take precedence.

23.0 SUCCESSORS IN INTEREST: This contract shall be binding upon successors and assigns.

24.0 SUITABLE MATERIALS: All materials, supplies or equipment offered by a contractor shall be new, unused, of recent manufacture, and suitable for the manufacturer's intended purpose unless the specifications allow for used, rebuilt or remanufactured equipment.

25.0 TAXES: Prices quoted in contracts must be exclusive of federal, state, and local taxes. If the contractor believes that certain taxes are payable by the State, the contractor may list such taxes separately, directly below the bid price for the affected item. The State is exempt from Federal Excise Tax because articles purchased are for the exclusive use of the State of Alaska.

26.0 WARRANTY: Unless otherwise stated, all equipment shall be new and current model and shall carry full factory warranties. The contractor warrants all goods delivered to be free from defects in labor, material and manufacture and to be in compliance with contract specifications. All implied or expressed warranty provisions of the Uniform Commercial Code apply. All warranties shall be for and benefit the State.

SECTION II

SPECIAL TERMS AND CONDITIONS

NOTE: This section is for Terms and Conditions that are "special" and/or unique to a particular contract.

1.0 DELIVERY:

1.1 **Pre-delivery service:** Prior to delivery, each vehicle, piece of equipment, or attachment shall be serviced and inspected by the dealer or his agent. A certification of this inspection must include the following (as applicable to the type of equipment):

1.1.1 Dealer and vehicle identification.

1.1.2 Check-off of service and inspection performed including a list of all fluids including type weight and specification that are in the equipment as delivered for all fluid compartments.

1.1.3 The vehicle's crankcase, differential and transmission, and other fluid compartments shall be filled to the manufacturer's recommended capacity.

1.1.4 Fuel tank shall be filled to at least register a minimum ¼ full on the fuel gauge, unless restricted by the commercial carrier, when the vehicle arrives at the delivery location.

1.1.5 The vehicle shall be clean and free from defects when delivered and should be ready for immediate and continued use upon delivery.

1.1.6 Units delivered in an incomplete state, or that have deficiencies per the specification, are subject to the damage charges as noted in paragraph 4.0 below.

1.2 **Delivery Receipt:**

1.2.1 A delivery receipt will be required for the delivered unit. This form will be supplied by the State Equipment Fleet prior to delivery. The receipt must be filled out by the vendor, and acknowledged by state receiving personnel by signature and date of actual receipt of equipment. One copy of this delivery receipt is to be given to the state-receiving agency. The original shall accompany the vendor's invoice to support and properly identify the vehicle delivered.

1.2.2 Vendors are cautioned and advised that such delivery forms or other receiving type documents will not in any way be construed to mean the state has formally and fully accepted unit(s) referenced thereon as complete and meeting every specification set forth. The Regional Equipment Manager is to be contacted regarding delivery coordination and contacts.

1.2.3 Under no conditions will warranty documents be presented at time of delivery for signature. Only the Contracting Officer or designee may sign warranty documentation.

2.0 LINE SHEETS/BILL OF MATERIALS:

2.1 It is required within 30 days after delivery that the contractor provide a comprehensive listing of all components used to assemble the unit.

2.2 This includes any components installed by the manufacturer or any subcontractor or the contractor.

2.3 Information will include at a minimum, when available, make, model serial number on items such as engines, transmissions, axles, tires, bodies, plows, snow wings, belly blades, cranes, etc. The listings will be specific to each piece of equipment and will be provided on an individual CD for each unit delivered.

2.3.1 On after-market items that are installed, part numbers with descriptions, such as, but not limited to hydraulic fittings, are to be provided.

2.4 A minimum of four (4) CD's per unit are to be provided and marked with the make, model, and last main numbers of the units serial number or State PO number.

3.0 F.O.B. POINT:

3.1 The price of each unit is to be based on delivery to Seattle/Tacoma dockside area.

3.2 The F.O.B. point for all items purchased under this contract is the final destination anywhere within the State of Alaska. Ownership of and title to the ordered items remains with the contractor until the items have been delivered at their final destination and are accepted by the State.

3.3 The cost of shipping and delivery for orders beyond the limits of Seattle/Tacoma dockside will be handled as follows. The contractor will prepay the shipping and delivery charges to any destination named by the State in its order. The contractor will charge-back those shipping and delivery charges to the State as a separate line item on the State's invoice.

3.4 All shipping charges over $100 must be documented by a copy of the actual shipping invoice and received with the invoice charge to the State.

4.0 DAMAGES FOR LATE DELIVERY AND NON-CONFORMING GOODS:

4.1 Time is of the essence in this contract. The contractor is expected to deliver goods that conform in all material respects to the contract specifications on or before the date provided therein, as may be amended by written agreement of the parties.

4.2 In the event that the goods are delivered late or in the event that the goods do not conform in all material respects to the contract specifications, the State shall be entitled to offset against the Contract Price, as liquidated damages and not as a penalty, an amount equal to $25.00 per day multiplied by the number of days elapsing between the delivery date provided in the specifications and the date that conforming goods are delivered to the State. The number of days for which liquidated damages shall apply shall include, in the case of non-conforming goods, the time reasonably necessary for the State to inspect the goods.

4.3 These liquidated damages represent a reasonable estimate of amounts necessary to compensate the State for loss of use of the goods during the period in which the

goods would have been available to the State if conforming goods had been timely delivered.

5.0 WARRANTY:

5.1 **Standard Warranty Package:** Unless otherwise stipulated by this contract, the contractor will provide a three-year (36-month) warranty.

5.1.1 Full (100%) Parts and Labor Warranty Coverage of all components for 36 months (three-years), from the date the unit is placed in service. Warranty repairs shall take place at the vendor's authorized warranty service centers in Anchorage and/or Fairbanks. Contractor are required to have authorized warranty repair centers located in Anchorage and Fairbanks at a minimum. All travel costs for warranty performed outside of these areas will be billed as follows:

5.1.1.1 Travel Labor Charge: Travel labor will only be reimbursed for the time the employee is traveling from a warranty service center to the in-service location and return.

5.1.1.2 Mileage Charge, from the warranty service center to the in-service location.

5.1.1.3 Meals are paid at actual and charges must be accompanied by receipts and are not to exceed the State authorized $42.00 per day.

5.1.1.4 Transportation, such as airfare, shall be reimbursed at actual and all charges are to be accompanied by a receipt/copy of the ticket.

5.1.1.5 Lodging shall be reimbursed at actual and shall not exceed $100.00 per night unless no other lodging is available. Requests for reimbursement must be accompanied by a receipt.

5.1.1.6 Travel must be charged from the closest warranty service center to the in-service location unless otherwise approved by the Contract Administrator.

5.1.2 Full (100%) Warranty Coverage includes all cost of labor, parts, freight of parts or associated tools, transportation and travel in the Anchorage or Fairbanks areas (within a 10-mile radius), lubricants, miscellaneous cost, etc., to place the unit in like-new condition.

5.1.3 Should the manufacturer's standard warranty exceed the minimum State warranty requirements, the manufacturer's warranty will run in conjunction with and enhance the State's warranty, then continue for the remainder of its term.

5.2 **General Warranty Requirements for all Equipment:**

5.2.1 **Warranty Exceptions:**

5.2.1.1 For clarification, warranty does not apply to normal wear and tear or maintenance items, accident damages, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer.

5.2.2 **Warranty on Attachments:** Same as Standard Warranty Package.

5.2.3 **In-Service Date:**

5.2.3.1 Warranty on vehicles not placed in service immediately upon receipt because of time lag to construct body components and/or installation of special equipment, or due to seasonal usage or other delay, shall be warranted from the date the vehicle is placed in service. The receiving agency shall notify the vendor/manufacturer in writing of the actual "in service" date. Notification of the requirement for delayed warranty will be provided on delivery orders whenever possible.

5.2.4 **Authorized Warranty Dealer (Contractor) and Subcontractor:** For the purpose of this contract, the contractor must meet the following applicable requirements:

5.2.4.1 Contractor must:

5.2.4.1.1 possess a current Alaska Motor Vehicle Dealer License pursuant to AS 08.66.010 through AS 08.66.090, when offering motor vehicles, trailers or semi-trailers, and;

5.2.4.1.2 be a manufacturer(s) authorized warranty service dealer for the unit, and;

5.2.4.1.3 have the capability to providing warranty servicing and repair work within the State of Alaska, with authorized warranty repair facilities in Anchorage and Fairbanks at a minimum.

5.2.4.2 Contractor, if appropriate, shall submit the name, address, Alaska business license of any subcontractor who will provide the warranty servicing and repair work referenced in paragraph 5.1 above. The Contractor must also provide contractual documentation or agreements with the subcontractor insuring the state that the subcontractor will provide complete contract performance on behalf of the contractor as set forth in this ITB and verification that the work provided will maintain manufacturer's warranty requirements.

5.2.4.2.1 Approval of all subcontractors must take place prior to the bid opening.

5.2.4.2.2 The use of a subcontractor does not exclude the provisions as noted in paragraphs 5.2.4.1, and subsequent paragraphs, as requirements to the contractor.

5.2.5 **Warranty Claims:**

5.2.5.1 Warranty will be provided at the unit's assigned (in-service) location. Because of the remote location of some equipment it is not always practical to deliver equipment to authorized warranty repair facilities. In these cases, the vendor may perform warranty work at the state's location or, the State of Alaska, at its discretion, reserves the right to perform the warranty work and be reimbursed by the vendor.

5.2.5.2 The State of Alaska has established a warranty procedure whereby the vendor is to be notified via letter, telex, fax, etc. that warranty work needs to be performed. If time is of the essence, a telephone call confirmed by one of the above written procedures may be utilized. The vendor must notify the state immediately that it will begin to perform the warranty work at the equipment location within 48 hours from receipt of written notification. The State may, at its discretion, proceed to make warranty repairs with its own work force in the case of emergency situation or to preclude excessive downtime (greater than 48 hours).

5.2.5.3 Failure to notify the State, that the vendor intends to begin to perform warranty work promptly under this paragraph, by the end of the business day following the states notification that work is required to be performed, is considered a contractual breach.

5.2.6 The vendor will be invoiced for required warranty work performed by the state. The shop rate to be charged for warranty work performed by the state will be **$81.00** per hour. Labor hours to be charged will be in accordance with appropriate flat rate manuals. If flat rate manuals do not cover the labor operation, actual repair time will be used. Warranty work performed by state shop personnel at locations where no shop personnel are permanently stationed may be subject to travel expenses incurred involving those warranty repairs.

5.2.7 Factory Recall:

5.2.7.1 Nationwide factory recall or product update programs are the responsibility of the vendor and/or manufacturer. The State will attempt to bring affected equipment to an authorized repair facility. However, because of the remoteness of some equipment this is not always practicable or economical. In such cases, factory recall and modification work will be handled the same as warranty work. Factory recall notices sent to the state should, in addition to serial number, include model, year, and dealer from whom purchased.

5.2.8 **Hazardous Material:**

5.2.8.1 Due to concerns about liability resulting from hazardous materials being left at the work site on State of Alaska property,

effective immediately no vendors will be allowed to use the State of Alaska rural airport facilities to perform warranty work unless they agree and sign a letter of intent stating that all waste products including oils, coolant and garbage will be removed from the work site. Vendors should note that in some village locations other suitable facilities might be available for rent from local residents or village authority.

6.0 REPAIR ORDERS AND DOCUMENTATION:

6.1 Any work performed by the contractor or approved subcontractor, whether warranty or any other work on a piece of equipment purchased under this ITB, will require a copy of the repair order, any invoices showing parts and commodities including oils and types used.

7.0 PUBLICATIONS:

7.1 Publications, when ordered are to be received by the State of Alaska no later than 10 days after receipt of the unit. Custom manuals may be delivered no later than 90 days after receipt of the unit. Delivery will not be considered complete until the publications for each unit have been received by the State of Alaska. Note: Publications, when required, will be ordered on the same Purchase Order as the unit itself.

7.1.1 All manuals are to be pre-assembled in factory binders prior to delivery.

7.1.2 In addition to paper manuals being supplied, a CD (Compact disc) is to be provided (if available) with each set of publications ordered. Separate pricing is to be provided for a complete set of paper manuals as well as a CD version. Refer to Section III –Price Schedule for required OPTIONAL pricing and to the individual specification.

7.2 **Service Manuals:**

7.2.1 Complete set(s) (compact disc or books) to include applicable information covering prime unit and attachments:

7.2.2 Body, chassis, and electrical

7.2.3 Engine, transmission, and differential(s) (service and rebuild)

7.2.4 Electrical and Vacuum troubleshooting

7.2.5 Wiring diagrams

7.2.6 Service specifications

7.2.7 Engine/emission diagnosis

7.3 **Parts Manuals:**

7.3.1 Complete set(s) (compact disc or paper books) including hitch and all updates. If updates are not provided during the two-year warranty period, the State will order them from the manufacturer and bill the contractor for the full cost, including shipping.

7.3.2 Parts manuals are to be customized by serial number.

7.4 **Operator's Manuals:** Complete set(s) to include prime unit and attachments.

7.5 **Quantities:** As noted on the purchase order.

7.6 **Manuals:** To be delivered to, and receipt signed by person(s) as noted on the Purchase Order.

7.7 **Service Bulletins, Etc.:** The contractor must provide appropriate service bulletins, technical support bulletins, service letters, product support bulletins, and/or any other information type notifications that are sent out to the vendor or used by the manufacturer in the maintenance and report of the vehicle, equipment or attachments being provided. The intent of this clause is that the State of Alaska be provided notification of any and all changes or improvements that may affect the maintenance, reliability, longevity, and safety of our equipment. This information will be provided as soon as possible to person(s) as noted on the Purchase Order.

8.0 STATEMENT OF ORIGIN: The contractor will be required to furnish a Manufacturer's Statement of Origin for Automotive or Non-Automotive rolling stock for each unit. All such documents shall be forwarded to:

DOT&PF, HQ State Equipment Fleet
2200 E. 42nd Avenue Room #317
Anchorage, Alaska 99508

9.0 WEIGHT VERIFICATION SLIPS: If required in the Price Schedule, a weight scale ticket(s) of the completed unit(s) will be included with the Statement of Origin.

10.0 INSPECTIONS:

10.1 The State's inspection of all materials and equipment upon delivery is for the sole purpose of identification. Such inspection shall not be construed as final or as acceptance of the materials or equipment if materials or equipment do not conform to contract requirements. If there are any apparent defects in the materials or equipment at the time of delivery, the State will promptly notify the contractor thereof. Without limiting any other rights of the State, The State at its option, may require the Contractor to:

10.1.1 Repair or replace at the contractor's expense, any or all of the damaged goods,

10.1.2 refund the price of any or all of the damaged goods, or

10.1.3 accept the return of any or all of the damaged goods.

10.2 Costs of remedying all defects, indirect and consequential costs of correcting same, and/or removing or replacing any or all of the defective materials or equipment will be charged against the contractor.

11.0 PRICE:

11.1 **Price Guarantee:** The contractor is responsible to maintain prices under the contract firm for 180 days after bid opening. All price increases or decreases must remain firm for the following 180 days.

11.2 **NO RETROACTIVE PRICE INCREASES WILL BE ACCEPTED**.

11.3 Price adjustments, increases or decreases, for subsequent orders, may be made by providing the Contracting Officer satisfactory evidence that all of the following conditions exist:

11.3.1 The increase is a result of the increased cost at the manufacturer's level and not costs under the contractor's control, and that;

11.3.1.1 The increase will not produce a higher profit margin for the contractor than that on the original contract, and that;

11.3.1.2 The increase affects only the item(s) that are clearly identified by the contractor.

11.3.1.3 Satisfactory forms of the evidence of the above facts may include a certified invoice from the manufacturer, or an affidavit from an independent professional price-tracking firm that is recognized by the industry as reputable and knowledgeable. The contractor must be able to show the difference between the prior year's price and the current difference in the price being requested.

11.4 **Price Decreases:** During the period of the contract, the contractor must pass on to the state all price decreases, such as fleet rebates. A contractor's failure to adhere strictly and faithfully to this clause will be considered a material breach of contract. The state reserves the right to cancel the contract if the contractor fails to properly perform the duties set out herein.

12.0 COOPERATIVE PURCHASING:

12.1 All requests to cooperatively purchase, by qualified political subdivisions, from the resulting contract shall be approved by the Contracting Officer.

12.2 At no time may the contractor change the terms and conditions, alter the price to another entity, which differs from the contractual price, nor charge undisclosed administrative fees to allow cooperative purchasing.

12.3 The contractor shall charge, and subsequently reimburse to the State after receipt and payment by purchaser, a users fee of 2% or $1,000.00, whichever is less, for each unit ordered by a qualifying political subdivision. Any administrative fee resulting to the contractor in fulfillment of this requirement must be included in the price of the offered unit.

13.0 MANUFACTURER'S REBATE (INCENTIVES): In any circumstance during or prior to completion of the contract, whereupon the State of Alaska becomes eligible to receive a rebate for any vehicle purchased under this contract, it shall be the CONTRACTOR'S responsibility to inform the Contracting Officer in writing and to advise the procedures for obtaining such rebates.

14.0 REPLACEMENT PARTS:

14.1 The State of Alaska shall expect the dealer or manufacturer to provide replacement wear parts to the Fairbanks International Airport Equipment Maintenance Facility within seven (7) days of order. All other parts must be available within ten (10) working days.

14.2 Back order procedures: Back orders are acceptable; however, the ordering shop shall be apprised at time of original orders as to the expected delay in delivery.

14.3 Warranty: All products supplied by the contractor shall be warranted against defects in materials and workmanship for a minimum of 90 days, commencing at the time of installation as long as the installation is within 12 months of purchase. The cost of any defective product and the labor required to replace the defective product shall be the obligation of the contractor.

14.3.1 If the manufacturer's warranty exceeds the stated warranty then manufacturer's warranty supercedes.

14.3.2 Parts Return: Within 12 months of purchase, the State is to be allowed to return new, parts with full refund, less shipping charges.

14.3.3 Invoicing: Full description of item is required on all invoices, packing lists and billings.

15.0 BRAND NAME SPECIFICATION: For purposes of this ITB, certain vehicle accessories are specifically identified by brand name and model/part number. Only the listed brand name and model/part numbers are acceptable. Substitutes shall be not allowed.

16.0 ADDITIONS OR DELETIONS: The State reserves the right to add or delete items, agencies or locations as determined to be in the best interest of the State. Added items, agencies or locations will be related to those on contract and will not represent a significant increase or decrease in size or scope of the contract. Such additions or deletions will be documented via mutual agreement, will be at prices consistent with the original bid price margins, and will be evidenced by issuance of a written contract change notice from the Contracting officer.

17.0 CONTRACT ADMINISTRATION: The administration of this contract, including any/all changes, is the responsibility of the Contracting Officer, HQ State Equipment Fleet.

18.0 PROPRIETARY INFORMATION AND STATEMENTS OF CONFIDENTIALITY:

18.1 Except as set forth in this provision, all information in all bids will be made public under AS 36.30.530 not later than the time of issuance of a notice of intent to award.

18.2 If the offeror submits information considered by it to constitute a trade secret or proprietary data, such information may be expressly designated as such, and must be accompanied by the offeror's certification that (1) the information has consistently been maintained by its owner as a trade secret or as proprietary information, (2) the owner of the information has taken due care to protect it from release to non-privileged persons, and (3) to the best knowledge of the offeror, the information has not lost its status as trade secret or proprietary information, whether by lack of diligent protection, release to any non-privileged person or otherwise.

18.3 **Absence of such certification, any claim of confidentiality will be ignored, and the contractor may not hold any reasonable expectation of confidentiality.**

18.4 Any information so certified will be held confidential so long as the contracting officer concurs that it constitutes a trade secret or proprietary data, and deems it

not critical to determination of the price, quantity, or delivery terms bid, or the responsiveness of the bid.

18.5 By submission of a bid, the offeror consents to the Contracting Officer's exercise of reasonable judgment as to concurrence with any assertion of confidentiality, and waives any and all claims for release of information that the Contracting Officer reasonably deems not confidential notwithstanding a certified assertion of confidentiality.

18.6 A certified assertion of confidentiality in which the Contracting Officer concurs, with respect to information the Contracting Officer deems critical to determination of the price, quantity, or delivery terms bid, or the responsiveness of the bid, will cause the bid to be rejected as a non-responsive bid.

19.0 EQUIPMENT RELIABILITY:

19.1 Reliability of equipment is paramount importance to the State. It is the policy of SEF to require minimum levels of reliability from owned or leased equipment for it to be considered acceptable. Equipment offered for this contract must be capable of meeting the acceptable reliability standard stated below.

19.2 **Acceptable Reliability**: The state will monitor equipment reliability. Acceptable reliability for this contract is achieved when a machine achieves or maintains a Reliability Ratio (RR) equal to or exceeding the following:

19.2.1 A .90 (90 percent) RR during any consecutive 12-months (365 days) during the warranty period.

19.2.2 A .75 (75 percent) RR per operational month (recognizing operational as subject to weather and being defined by calendar days) during the consecutive 12-month period.

19.2.3 A RR below the stated percentages does not meet minimum reliability requirements for state owned equipment.

19.3 **Machine Failure and Downtime**:

19.3.1 **Machine Failure** is any and all loss of capability to perform fully, as specified, which is not attributed to **Conditioned Failure**. Machine failure resulting in the unit being out of service is defined as **Downtime**.

19.3.2 **Conditioned Failure** is any machine failure attributable to accident, operator abuse or other external cause not attributable to a defect in the machine itself.

19.3.3 **Downtime** is the actual number of days or fractions of days that the equipment is in a state of Machine Failure. Downtime does not count time used for scheduled maintenance (including preventative maintenance and scheduled major overhauls), time lost for repair maintenance and scheduled major overhauls), time lost for repair of damage as a result of operator abuse or machine misapplication; or time lost as result of accident or an act of God. Downtime includes:

19.3.3.1 Actual shop hours (and/or field repair hours) required to return unit to full operational status following machine failure, including trouble-shooting, repair, necessary replacement of parts, and necessary adjustments, plus

19.3.3.2 Time lost waiting for parts and/or vendor assistance. "Waiting downtime" also applies if need for parts/assistance is discovered during routine maintenance and return to service is deemed counterproductive. In this case, "waiting time" clock begins with notice of need to vendor. Allowance may be considered in "waiting time" calculations if arrival of parts/ assistance is delayed by transportation shutdown, to include verifiable transportation scheduling difficulties such as infrequent flights as long as all reasonable alternatives have been exhausted. Parts and assistance are to be provided by the quickest means reasonably possible to avoid unnecessary delays and downtime.

19.3.4 **Out of Service Report (OSR):** Down time resulting from machine failure is the actual number of hours a machine is out of service as recorded on the OSR or in the Equipment Maintenance Management System (EMS).

19.3.5 The state will record all downtime on an OSR or EMS work order, which will be originated for each occurrence of downtime. The document will show the date and time a unit went down, the location where the machine was abased, the reason the machine is down, date and time the vendor was notified (if applicable), the date and time the machine was returned to service, and the total hours of downtime.

19.3.5.1 The Contract Manager will finalize and approve the OSR or EMS work order. Both are available for Contractor review.

19.3.6 **Reporting Downtime:** The Contracting Officer will maintain documentation of all Downtime, and shall send copies of such documentation to the contractor.

19.3.7 **Calculation of Reliability Ratio (RR):** RR is the mathematical ratio of operated time (uptime) to out of service time (downtime). The RR will be calculated according to the following formula:

19.3.8 $$RR = \frac{\text{Days in a Month} - \text{Days Out of Service}^{1}}{\text{Days in a Month}^{2}} = \frac{DM-DO}{DM}$$

Note: [1]**Fractional Days** apply, i.e., a unit is out of service 8 hours in a 24 hour period equals 1/3 or .33% of a day.
[2] **A day** is allocated as 24 consecutive hours from 12:00 AM to 12:00 AM.
Example: 30 days DM with 2 days, 8 hours DT would result in:

$$RR = \frac{30-2.33}{30} = .92$$

19.3.9 **Unacceptable Reliability:** If an item of equipment fails to perform at an acceptable level of reliability during the warranty period, the Contracting Officer will notify the contractor and request immediate remedy. Failure to remedy the piece of equipment within 30 days for failure will result in a breach of contract and the immediate return of the equipment and reimbursement of the original contract price, less shipping. A usage fee will also be deducted at $15.00 per hour as noted on the hour meter.

Unacceptable Reliability: If an item of equipment fails to perform at an acceptable level of reliability during the warranty period, the Contracting Officer will notify the contractor and request immediate remedy. Failure to remedy the piece of equipment within 30 days for failure will result in a breach of contract and the immediate return of the equipment and reimbursement of the guaranteed value (V) of the unit as follows:

Original cost of the unit less (-) Freight = $_____ (V)

(V) Less (-) the cost of operation as listed in the Equipment Rental Rate Blue Book for the 2nd quarter, 2005 or comparable equipment or the current Federal Fixed Usage Rate for the Class for the State of Alaska, (a, b, or c, per hour) X the number of hours used = _____ (DV)

a. Loader mounted snow blower = $192.00 per hour

b. All Carrier Units = $270.00 per hour

Example: Cost of single unit, less freight = $150,000. The hourly cost is $150.00 per hour. The unit was used 150 hours prior to failing the acceptable reliability. The contractor guaranties the unit's worth at $127,500.

19.3.10 Prior to return, the state will correct all reasonable cosmetic deficiencies (such as excessive rust) and those deficiencies that are directly related to damage due to accidents, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer, prior to public auction.

19.3.11 The tires will be serviceable with at least 50% remaining tread.

19.3.12 Oil samples, as per manufacturer's service manual recommendations, will be taken by State of Alaska Maintenance on the engine, transmission, differentials and hydraulics.

19.3.13 In the case of dispute, at the expense of the State, a qualified agent from Northern Adjusters, Inc., or another professionally recognized appraiser, may be commissioned for an independent claim appraisal. Such appraisal shall be binding upon the State and Contractor."

19.4 **BID BOND:**

19.4.1 A contractor must submit along with its bid a bid guarantee in the form of a Certified or Cashier's check, Bid Bond or Supply Bond in the amount of five percent (5%) of the bid amount or $5,000.00, whichever is less, made payable to the State of Alaska. The state will retain the bid guarantee of any bidder the state might award a contract pursuant to the Invitation to

Bid until the apparent successful contractor for that item of equipment has executed a contract and furnished a satisfactory performance bond. If the contractor fails to deliver the required performance bond within five working days after final award, the bid guarantee will be forfeited to the State of Alaska. The bid guarantee will be returned as soon as practical.

19.5 **PERFORMANCE BOND FOR WARRANTY & PERFORMANCE:**

19.5.1 The performance bond is due at the time of the first purchase order.

19.5.2 The state does not have backup equipment in many of its locations. Consequently, new-unit reliability and warranty performance is vital importance. To insure highest possible reliability and warranty service this contract requires the contractor to post **performance security, in one of the forms listed below,** within 30 days of the first purchase order. The purpose of the posted performance deposit is to secure performance over the entire term of the contract. The performance security must cover any remaining warranty in the event that the contractor is unable to or otherwise fails to complete the three-year warranty period. The amount of the performance deposit will be $**50,000.00**. Release of the performance security will be contingent solely upon the acceptable completion of the terms of the original contract.

19.5.3 The Performance Deposit must be posted for a **TWO YEAR TERM AND THEN A ONE YEAR, FINANCIAL GUARANTEE SECURITY OR SURETY BOND SECURED BY A SURETY COMPANY AGREED TO BY THE PARTIES TO THIS CONTRACT WILL BE PROVIDED WITHIN 90 DAYS OF THE EXPIRATION OF THE FIRST SECURITY. Failure to post the successive bond, OR to provide an alternate security as listed below, will be cause for breach of contract and immediate cancellation of any future orders.** The performance deposit will be valid from the date the unit is delivered is placed into service at the assigned location.

19.5.4 **Performance Bond**: A performance bond must be written in a form satisfactory to the state by a company authorized to do surety business in Alaska. The performance bond must provide that it is payable to the State of Alaska as security for the contractor's full and faithful performance of the contract.

19.5.5 **Alternate Security**: In lieu of a performance bond, a contractor may post security in the form of a certified or cashier's check, or a certificate of deposit, to be returned to the contractor provided that the contractor fully and faithfully performs the contract, including all warranty obligations.

19.5.6 **Certified or Cashier's Check**: A certified or cashier's check, made payable to the State of Alaska.

19.5.7 **Certificate of Deposit**: A Certificate of Deposit (CD) made payable to the State of Alaska. Inclusion of other verbiage on the "payee" or "pay to" line will render the security unacceptable.

SECTION III

PRICE SCHEDULE

Lot #4

Item #	Unit	Description	Total $ Amount
4a	ea.	Snow Blower, minimum 4000 ton-per hour, 4x4 carrier mounted Warranty as per Section II – Special Terms and Conditions. FOB: Dockside Seattle/Tacoma (see note below) Per specification **#757- 4K- 5K**, contained herein. (The below optional items are not included in the above pricing)	**$497,800.00**
		State Class # 757	
		Year, Make & Model Offered:	**2006 OSHKOSH H2723B**
		OPTIONAL ITEMS:	
4b	ea.	Optional - Air Conditioning: (As per Spec Item 5.5)	**$ 7,370.00**
4c	ea.	Optional – Minimum 650 HP Blower Engine: To provide minimum capacity of 5,000 TPH. (As per Spec Item 7.2)	**$14,600.00**
4d	ea.	Optional - Loading Chute: (As per Spec Item 10.4)	**$25,700.00**
4e	ea.	Optional – Training in Anchorage: (As per Spec Item 13.0)	**$ 2,890.00**
4f	ea.	Optional – Training in Fairbanks: (As per Spec Item 13.0)	**$ 3,350.00**
4g	ea.	Optional – Training in Juneau: (As per Spec Item 13.0)	**$ 3,860.00**
4h	ea.	Optional – Publications (Paper) Per Set: (As per Spec Item 14.15)	**$ 2,650.00**
4i	ea.	Optional – Publications (CD) Per Set: (As per Spec Item 14.15)	**$ 1,284.00**

Required Delivery: **Not later than 210 days ARO** to dockside Seattle/Tacoma area.

NOTE: Final shipment to in-service locations as annotated on the Purchase or Delivery Orders will be arranged and pre-paid by the contractor. The actual cost will be invoiced as a separate line item on the invoice for full reimbursement by the State. Shipping arrangements will always be in the best interest of the State and any extraordinary costs or circumstances pre-approved by the Contracting Officer prior to shipment. Refer to Section II – Special Terms and Conditions, paragraph 3.0.

Weight Scale tickets, as per Spec Item 14.1 are to be provided.

TRAVEL COSTS (For warranty performed outside the Anchorage, Fairbanks, or Juneau area):

Per Mile	**$2.50**
Per Hour (travel labor)	**$80.00**

SECTION IV

SPECIFICATIONS

SPECIFICATION #757-4K-5K
4x4 Carrier Mounted 4,000 TPH Snow Blower
Also as a 5,000 TPH Snow Blower
October 19, 2005

GENERAL SPECIFICATION:

It is the purpose of this specification to describe a new, and of the manufacturer's latest current year production model and design, 4x4 carrier for both highway and airport use. Carrier is to include its own power drive system. An auxiliary engine will be used to power the two-stage rotary snow blower.

The basic unit with a minimum 525 HP engine will be required to blow a minimum of 4,000 TPH (Tons-Per-Hour).

A 650 HP engine version will be required to blow a minimum of 5,000 TPH.

One of a kind or first off the production line will not be accepted.

The carrier's cab shall be positioned behind the blower chute. Cab over design is not acceptable.

Unit is to include all factory standard equipment, unless specified otherwise.

APPLICATION:

This equipment will be utilized for winter snow removal operations at Alaska rural airports throughout Alaska on runways, ramps, and taxiways, at speeds up to 40 MPH.

Unit will be subject to varying terrain and weather conditions to minus 60 degrees Fahrenheit.

DOCUMENTATION REQUIRED:

A basic manufacturer's product brochure(s) describing the unit was provided.

In addition, specifications marked with an asterisk (*) require supporting documentation, which indicates specifically what the contractor intends to supply in regard to said items and/or how specifications will be met. **In order to help prevent technical errors, following each asterisked is space that may be used to address all of the asterisked items. It is <u>required</u> that a letter of clarification <u>or</u> the space behind the asterisked items be used to supply the required information. The area behind the asterisked item is to refer to a product brochure, manufacturer's technical data sheet, or letter of clarification, which indicates specifically the contractor, intends to supply in regard to said items and/or how specifications are met.**

TYPICAL MANUFACTURER:

OSHKOSH TRUCK CORPORATION. Provided all of the following minimum specifications are met.

1.0 POWER TRAIN – CARRIER:

1.1 Engine (Carrier):

1.1.1 (*) Diesel, water-cooled, four (4) cycle, 12.5 liter (763 cubic inch) minimum displacement, electronically controlled, 380 SAE gross horsepower minimum, 1500 pound foot. Torque minimum. Not to exceed 2,100 rpm.

C13-380 HP Cat engine with ACERT technology. Reference literature in the bid file.

1.2 Engine, General:

1.2.1 (*) Engine to be mounted to rear of chassis for unit balance and to allow for minimum noise injection into cab.

Engine mounted to rear of chassis for unit balance and minimum noise injection into cab.

1.2.2 Governor will be of the correct type to control and limit engine speeds as recommended by the engine, driveline, and power train component manufacturers, for its intended use in this vehicle.

1.2.3 To be equipped with electronic high idle circuit, to maintain approximately 1200 RPM (for warm-up purposes). Cable control is not acceptable.

1.2.4 Engine shall meet current EPA off-highway emission requirements at time of delivery.

1.3 Engine Cooling System:

1.3.1 Permanent type antifreeze to minus 60 degrees Fahrenheit.

1.3.2 Radiator:

1.3.2.1 The radiator shall include a steel tank with the core being constructed of copper and brass (plastic or aluminum radiator is not acceptable.

1.3.2.2 The radiator shall be capable of maintaining the correct operating temperature under all conditions encountered without dependence on other systems to provide cooling. If cooling system incorporates the use of shutters or other method of diverting air to either the radiator or engine air intake, these systems shall operate consistent with the engine manufacturer's recommendations.

1.3.2.3 To be mounted securely on vibration dampening mounts.

1.3.3 A coolant circulation bypass will be provided to allow coolant to circulate within the engine block while thermostat is closed.

1.3.4 Drain cocks will be provided at the low point of radiator and engine block.

1.3.5 Safe and easy access to radiator fill shall be provided (hand rails with built-on ladder if necessary).

1.3.6 Engine coolant level sight gauge, easily seen by maintenance personnel when checking engine oil, etc.

1.3.7 Hoses: *GATES* Bluestrip, or GATES Greenstripe, or silicone to be provided on all radiator and heater hoses.

1.3.8 Hose Clamps: Utilized on engine coolant lines one (1) inch inside diameter or larger are to be *CONSTANT-TORQUE* or equivalent, stainless steel.

1.3.9 Airflow through engine compartment will be such that compartment maintains a positive pressure to prevent compartment from becoming filled with dry snow or other contaminants.

1.3.10 To include engine manufacturer's certification that the engine will maintain, but not exceed, a continuous operating temperature, as an operational unit, with a wide range of ambient temperatures to as low as minus 40 degrees Fahrenheit. *Certification to be provided not later than pilot inspection*.

1.4 Engine Air Intake System:

1.4.1 Must have two (2) stage (dual element) air cleaner.

1.4.2 Air filter restriction indicator, dash-mounted with audible alarm.

1.4.3 (*) Air intake may include a dual inside or outside system that will allow inside air intake when outside ambient temperature is 40 degrees Fahrenheit or below, or outside air intake when outside ambient temperature is above 40 degrees Fahrenheit. The process of changing from inside to outside or vice versa shall not require any tools other than a standard adjustable Crescent type wrench. Time involved should not take more than five (5) minutes, even in the most extreme weather conditions.

Includes inside and outside air intake for above -40 and below 40 degrees ambient air temperature operation. Can change from one to the other in less than 5 minutes with a crescent wrench in all weather conditions.

1.4.3.1 If outside air, even with the *DONALDSON* system, the unit must include a *SURECO* Turbo II or *SURECO* Power Ram or *ENGINAIR* system.

1.5 Engine Exhaust System:

1.5.1 Exhaust system to be designed to prevent rain, snow, or slush from entering exhaust system.

1.5.2 Exhaust piping to be located away from cab providing maximum visibility and be heat shielded if vulnerable to maintenance personnel.

1.5.3 Horizontal exhaust piping shall be shielded to prevent spilled flammable fluids from contacting surface, where applicable.

1.5.4 Mufflers and tailpipe will be designed to minimize noise without causing excessive backpressure.

1.6 Engine Fuel System:

1.6.1 (*) Capacity: Sufficient to supply fuel to the engine(s) when the engine(s) is/are operating at rated intermittent HP at governed speed for ten (10) hours, minimum, shall be provided.

Reference letters of clarification from Yukon Equipment and M-B Co. in the bid file.

1.6.2 When more than one (1) tank is furnished, means shall be provided to assure equalized fuel level in all tanks. The line, if used, shall be one (1) inch diameter, minimum.

1.6.3 Filters:

1.6.3.1 To be spin-on type.

1.6.3.2 To include ¼ turn valve(s), if required, to prevent excessive leakage when changing fuel filter(s)

1.6.3.3 Fuel filter(s) to be located in engine compartment with braided fuel lines to pump. (Steel lines are acceptable if both filter and pump is engine attached).

1.6.4 Fuel system to include heated fuel and water separator.

1.6.5 Fuel tank(s) to be mounted so as not to affect the balance of the unit (full or empty).

1.6.6 Fuel fill, minimum four (4) inch diameter with chained cap, shall permit easy fill operation, including access room, by all ground personnel (short or tall in height). Tight caps may require "Wings" to permit easy removal/installation.

1.7 Engine Oil Filtration: Oil filters to be spin-on type.

1.8 Engine oil drain to be equipped with a ¼ (one-quarter) turn ball shut-off valve (easily accessed). An extension hose, or piping, may be required to allow draining of oil into a bucket or pan that would be positioned at ground level. The ball valve, end of the hose, or piping would require a threaded cap or plug.

1.9 Engine Cold Starting Aids:

1.9.1 Automatic electronic ether injection system, *KBI* Dieselmatic, *TURNER* Quick Start, or equivalent.

1.9.1.1 To be wired through starter button.

1.9.1.2 To include an engine sensor switch.

1.9.1.3 System to be installed in engine compartment and to have maximum protection from the elements.

1.9.2 Engine Block Heater: Immersion type, highest wattage available, 110 volt AC (OEM if available).

1.9.3 Engine oil pan heater, one (1) each, 300 watt, 110 volt AC, silicone pad heater bonded to oil pan, *BESCO*, *KAT'S, WATLO,* or equivalent.

2.0 DRIVE TRAIN - CARRIER:

2.1 Design: To be two (2) axle, single tire, 4x4.

2.2 Transport Speed: With snow blower head in transport position, shall be capable of maintaining a continuous forward speed of not less than 45 MPH on dry level pavement.

2.3 Carrier Transmission:

2.3.1 (*) *ALLISON WORLD TRANSMISSION* Model HD4560P 4 or 5-Speed electronic. 5 Speed Allison 400 RDS transmission

2.3.2 To include Auto-Neutral feature that when the air parking brake is applied that the transmission automatically shifts into neutral.

2.3.3 To include oil level sensor option.

2.3.4 Any external lines to be steel or be steel braided.

2.3.5 To be compatible with engine.

2.4 Transfer Case:

2.4.1 (*) Two (2) speed with bevel gear differential.

Oshkosh 55000 Series, two speed bevel gear differential, 2.66:1.

2.4.2 Lockout control to be located in cab.

2.5 Axles:

2.5.1 Front:

2.5.1.1 Single front driven steering axle with single tire design.

2.5.1.2 (*) To be rated at 27,000 pounds minimum.

Front axle will be rated at 27,000 pounds.

2.5.1.3 (*) ***If equipped with a snow blower loading chute:*** To be rated at 29,000 pounds minimum.

Rated 29,000#. Reference literature and approval letter in bid file.

2.5.2 Rear:

2.5.2.1 Single rear driven steering axle with single tire design.

2.5.2.2 (*) To be rated at 23,000 pounds minimum.

Rated 23,000#. Reference literature and approval letter in bid file.

2.6 Drive steer axles to include tapered roller trunnion bearings (or bushings) (or combination tapered roller trunnion bearings and bushings) to help eliminate excessive wear because of the side force exerted from blowing snow.

2.6.1 Axles to be certified by manufacturer as being suitable for use in this vehicle and be designed for single tire mounting. *Certification to be provided not later than pilot inspection.*

2.6.2 Front and rear tread widths not to vary more than two (2) inches. Wheel spacers shall not be used to obtain correct tread widths.

2.6.3 Must have sufficient weight on front axle to provide adequate steering and braking control when Tapley or Mew values are at 0.20.

2.6.4 Differential Locks:

2.6.4.1 (*) Front axle to have driver controlled differential lock.

Front axle will have driver controlled differential lock.

2.6.4.2 (*) Rear axle to have driver controlled differential lock.

Rear axle will have driver controlled differential lock.

2.7 Drive Lines: Shall include shielding or guards to prevent damage to specialized components, such as hydraulic components, in case of driveline failure.

3.0 CHASSIS:

3.1 (*) GVWR: 50,000 pounds minimum.

GVWR will be 50,000 pounds without spot casting / loading chute is to be used.

3.2 ***If equipped with a snow blower spot cast/loading chute:***

3.2.1 (*) GVWR: 52,000 pounds minimum.

GVWR will be 52,000 pounds if spot casting / loading chute is used.

3.3 (*) Wheelbase: Maximum 168 inches. 164" wheel base

3.4 (*) Ground Clearance: Minimum of eight (8) inches. Ground clearance will be 8".

3.5 Frame:

3.5.1 Straight steel frame.

3.5.2 (*) Yield Strength: 110,000 PSI, minimum.

Frame yield strength is 110,000 psi.

3.5.3 (*) RBM: 2,580,000 inch pounds per rail, minimum.

Frame RBM is 2,818,000 inch pounds per rail.

3.5.4 To be reinforced as required to prevent distortion under maximum loads experienced during operation of this vehicle.

3.5.5 (*) Overall frame width to be between 34 and 39 inches nominal to minimize wracking and torsional stress during operation. 34" frame width.

3.5.6 Frame assembly to include cross members in addition to engine and drive train components to provide lateral frame stability.

3.5.6.1 Cross members are to be bolt-on (welded is not acceptable).

3.5.7 Frame liners, wrappers, fish plating, and bolt-on extensions are not acceptable.

3.5.8 Welding to the frame is not acceptable.

3.6 Steering:

3.6.1 To be full power or hydraulic power assist.

3.6.2 To be capable of easily maintaining directional control during operation.

3.6.3 Components to be installed to protect against damage.

3.6.4 (*) All-Wheel steering is required, including the option of (a) front wheel steer, (b) crab, and (c) coordinate steering, all controlled through the cab steering wheel. Rear wheel steer to be controlled by joystick, independent of steering wheel.

Oshkosh All Steer w/front, crab coordinate steer controlled through cab steering wheel. Rear steer controlled w/joystick or steering wheel.

3.6.4.1 An indicator showing the rear wheel position shall be in easy view of the operator.

3.6.4.2 Safety lockout shall automatically limit the unit speed to 15 MPH if the steering mode is not in "front wheel steer". The *OSHKOSH* Electronic All-Steer System is acceptable.

3.6.4.3 Mechanical or hydraulic locking system shall immobilize rear axle in the event of failure or deactivation.

3.6.5 For safety and emergency backup, mechanical linkage between front axle and cab mounted steering wheel shall be maintained at all times in all steering modes. An electric over hydraulic backup system may be provided, if valving and duplicate plumbing is installed, to guard against failure of hoses in the primary steering hydraulics' system.

3.6.6 To be equipped with completely enclosed steering drive axle at all cramp angles.

3.7 Brakes:

3.7.1 To be S-Cam. Disc brakes are acceptable. (Wedge brakes are acceptable on the front axle only.)

3.7.2 Service Brakes:

3.7.2.1 (*) To include ABS system.

Service brakes will include ABS system.

3.7.2.2 Shall be full air.

3.7.2.3 Foot operated control, suspended or treadle type.

3.7.3 Parking Brakes:

3.7.3.1 To be activated by same chambers on rear axle.

3.7.3.2 When parking brake is activated, the automatic transmission is to be automatically shifted into neutral. Refer to Transmission.

3.7.4 Brakes, disc and/or drum, shall be enclosed and shielded to help protect against moisture and sand. Enclosed refers to the drum brake systems only. Disc brakes are to be shielded.

3.7.5 Braking system to meet FMVSS standards.

3.7.6 Air System:

3.7.6.1 Air Compressor: 13 (13.0) cubic foot per minute (minimum).

3.7.6.2 To include *BENDIX-WESTINGHOUSE* AD-IP or *MIDLAND* DA33100 or *ROCKWELL WABCO* SS1200, air dryer with moisture ejector.

3.7.6.3 Air Filtering Device: To include a BENDIX Puraguard DL air-filtering device installed between the engine air compressor and the air dryer.

3.7.6.4 Quick release, or relay valves to be included for front and rear brakes.

3.7.6.5 Air Reservoir Tanks:

3.7.6.5.1 Heavy-duty, steel construction, primary and secondary, minimum 4,500 cubic inch capacity.

3.7.6.5.2 Primary air tank, to include a ¼ (one-quarter) turn ball valve with 3/8 (0.375) inch NPT threads, mounted on the outside of the left-hand side frame rail, easily accessible. Ball valve is to include a threaded plug.

3.7.6.5.3 Installed in protected locations.

3.7.6.5.4 Air tanks to have quick-drain to drain moisture from system, easily accessible from side of unit by ground personnel (a lanyard type cord may be necessary).

3.7.6.5.5 Safety overload valves to be included on air tanks.

3.8 Tires and Wheels:

3.8.1 (*) Five (5) each, including spare, aggressive snow tread design, radial tires, mounted on 10 hole (10 hole minimum) steel *BUDD* type rims (*OSHKOSH* and *STEWART & STEVENSON* split rims are acceptable). Tires and wheels to be adequately load rated for this application.

Will provide Oshkosh split rims and 395/85R20 Michelin XZL singles on front and rear axles and a spare tire and wheel. Rated for the application. See tire print in bid file.

3.8.2 **SPARE** tire with mounted wheel to be shipped loose. Spare must fit both axles.

3.8.3 All tires to be identical.

3.9 Suspension:

3.9.1 To be manufacturer's standard spring type.

3.9.2 Suspension will be designed to allow for proper operation of specified attachments.

3.9.3 The spring hangers, pins and supports shall be heavy-duty to give long life.

3.9.4 The pins shall be of the grease type with substantial bronze bushings.

3.10 Tow Hooks: Two (2) each, frame mounted, rear.

3.11 All fasteners to be grade eight (8), per SAE J429.

4.0 ELECTRICAL:

4.1 Master Electrical Switch:

4.1.1 Single high ampere master electric switch to cut off power source from battery to the ground (ground side if possible, positive side if not) and remainder of electrical system, *COLE HERSEE* #284-02 or *POLLACK* #51-315.

4.1.2 Located driver's side, in cab or near battery location, easily accessed, but not ordinarily visible to persons unfamiliar with vehicle.

4.2 Batteries:

4.2.1 To be maintenance free, group 31, with a total of 3,000 CCA at zero degrees Fahrenheit, minimum.

4.2.2 To be under hood or enclosed to prevent build up of snow on and around the battery terminals, but be easily accessible. If a roll-out tray is required, stainless steel glides will be used.

4.3 Charging System:

4.3.1 Alternator: Minimum 160 total AMPS, waterproof, carrier engine driven.

4.3.2 (*) High amperage draw (DC) heated windshield(s) to be powered by independent, dedicated alternator.

Will provide high amp draw (DC) heated windshield powered by independent, dedicated alternator, 75 amp.

4.4 All electrical control switches to be direct current rated.

4.5 Circuit Breakers: To be located in an easily accessed weatherproof electrical panel.

4.6 Ignition Switch: *ECHLIN* Model KS120 or *COLE HERSEE* Model M-712.

4.7 Lighting System:

4.7.1 Headlights: Halogen, with High/Low beam.

4.7.2 Driving Lights: Two (2) each, halogen, amber, mounted on top front left and right of cab, *PERLUX* #600-2 or equivalent.

4.7.3 Turn Signals: Self-canceling with 4-way flashers.

4.7.4 Cab interior dome light. Light is to come on when opening door(s) and is to also be operated by a separately driver controlled switch.

4.7.5 Spot Lights: Two (2) each, halogen, six (6) inch round with chrome housing, 50 watt, 160,000 candlepower, cab controlled, mounted left and right, near cab roof, *UNITY* or equivalent.

4.7.6 Work Lights:

4.7.6.1 Two (2) each, HID flood (*J.W. SPEAKER* or equivalent), 35 watt, adjustable, rubber mounted left and right, front upper outside cab. To be facing forward. These lights are to include their own separate switch.

4.7.6.2 Lighted engine compartment(s), switched at compartment. Lights are to give more than adequate lighting. (Our winters are dark).

4.7.7 Strobe Lights:

4.7.7.1 Two (2) each, *WHELEN* Model S360D strobe lights mounted on cab roof, visible from all directions.

4.7.7.2 Two (2) each, *WHELEN* Model S360D strobe lights mounted on top rear of unit, shielded to prevent flashing of light into operator's cab.

4.7.7.3 Left lenses color to be amber, right lenses to be blue.

4.7.7.4 Switch control center with "HIGH/OFF/LOW" to be within easy reach of operator. Don't forget to label switch.

4.7.8 Stop, turn, tail, and marker lights to be LED.

4.7.9 Backup lights, halogen.

4.7.10 All other lighting to conform to FMVSS regulations.

4.8 Backup Alarm: Electronic, self-adjusting sound level, *ACORN PRODUCTS* Model 1D-112AA, *PRECO* Model Preco-Matic 1040, *STAR* Model Starmatic 63-000, or *WARN* Model Reactor 2100504, located on rear of unit per manufacturer's recommendations.

4.9 Wiring:

4.9.1 All wiring shall be color-coded or continuously numbered every 18 inches minimum.

4.9.2 Located for maximum protection from snow and ice build-up, grease, oil, fuel, and heat from engine and components.

4.9.3 Routing through structural members to be protected by grommets.

4.9.4 To be secured by clips at intervals to prevent rubbing or chafing due to movement.

4.9.5 All applicable junction boxes, light housings, etc. to be constructed of corrosion proof material.

4.9.6 Spade and bullet connectors are not acceptable.

4.9.7 Outside of the cab wiring:

4.9.7.1 All connectors to be corrosion resistant and waterproof.

4.9.7.2 *THERMOSEAL* and *WEATHER-PACK* type connectors are acceptable.

4.9.8 Non-Factory Wiring:

4.9.8.1 All dealer/vendor installed items, which require connecting into the vehicle's electrical system shall be done using an OEM factory modified wiring kit whenever possible. All non-factory wire connections (splices, connectors, etc." shall be soldered and shrink tube insulated with adhesive/metable sealant, thick wall polyolefin shrink tubing (3M EPS-300 or equal). No non-factory crimp connections allowed. No cutting or splicing into the factory wiring harnesses allowed. All electrical connectors shall have dielectric grease applied to terminals to help reduce corrosion.

4.9.8.2 All accessories (strobe lights, operator controls. Light bar, etc. shall be wired through a 12- volt DC constant duty solenoid and controlled by bus bar mounted and permanently labeled auto-resetting circuit breakers. The solenoid shall be wired to the key switch.

4.9.8.3 All non-factory wiring shall be encased in a totally sealed wiring harness (no plastic split loom) to help prevent corrosion from magnesium chloride or urea. The wiring harness shall be well secured to the truck with neoprene aircraft stainless steel tubing clamps. Rubber grommets shall be used at all areas where the wiring passes through areas that could damage the wiring.

5.0 CAB:

5.1 The cab shall be positioned behind the blower chute or volute, cab over design is not acceptable.

5.2 (*) Cab Shoulder Width: Minimum 56 inches and maximum of 69 inches, wide enough for a two (2) man cab, but narrow enough for adequate visibility to the left and right for the operator.

Cab width is 60 inches, near center steering, with adequate visibility for two men.

5.3 Noise Suppression/Winterization:

5.3.1 Sides and ceiling shall have sound suppression material, approximately one (1.0) inch thick, perforated vinyl covered foam.

5.3.2 Floor and firewall to be insulated with closed cell foam and covered with rubber matting.

5.3.3 Rubber matting on floor will be slip resistant.

5.4 Heater and Defroster:

5.4.1 Must keep cab temperature at 50 degrees while exterior is at minus 40 degrees, Fahrenheit.

5.4.2 Primary Heater:

5.4.2.1 Minimum 200 BTU per cubic foot of cab volume or have a rating of 48,000 BTU (whichever is greater).

5.4.2.2 To be fresh air type with defroster ducts to front windshields and right and left side windows.

5.4.2.3 If two (2) engine design, the primary heater to be plumbed from the carrier engine.

5.4.3 Auxiliary Heater:

5.4.3.1 Minimum 200 BTU per cubic foot of cab volume or have a rating of 33,000 BTU (whichever is greater)

5.4.3.2 To be fresh air type, independently controlled.

5.4.3.3 If two (2) engine design, the auxiliary heater to be plumbed from the blower engine.

5.4.4 Heaters are to include independent temperature settings (utilizing carrier's hot engine coolant).

5.4.4.1 Main heater to include minimum three (3) speed fan motor(s).

5.4.4.2 Auxiliary heater may be single speed.

5.4.5 Heater hoses are to include valves near the inlets and outlets of the heaters for use when maintenance is required on the heater preventing excessive coolant loss. Valves are to be easily accessed.

5.4.6 Caged Defroster Fans: Two (2) each, dash or upper windshield mounted, two (2) speed, independently controlled.

5.5 **Air conditioning (OPTIONAL)**

5.5.1 To be internal. Roof mounted is not acceptable.

5.6 All outside air (fresh air) brought into the cab through heater and air conditioner system is to be filtered by an easily replaceable air filter(s).

5.7 Glass/Windows:

5.7.1 All glass to be tinted (stick-on type is not acceptable) safety glass.

5.7.2 Front windshield(s) to have a reverse slope to minimize glare.

5.7.3 Front windshield to have a minimum of two (2.0) square feet of glass area for every foot of cab width, for maximum visibility.

5.7.4 All glass shall be flat to allow economical local replacement.

5.7.5 Front windshield and side windows to include driver's area sun visor, fold-up style, green or gray tinted visor.

5.7.6 Front windshield(s) shall be heated by electrical lamination. Glue-on heat strips are not acceptable. Refer to specification item 4.0 and its sub-paragraphs for further information.

5.7.7 Driver and passenger side windows to be pop-open vent type or power up/down.

5.8 Wipers:

5.8.1 Electric powered multiple speed wipers with intermittent feature and include wet arm washer(s) on front windshield(s).

5.8.2 Side window wipers (on both left and right).

5.9 Deluge System:

5.9.1 Minimum 20 gallon capacity system is required with dedicated pump for visibility enhancement. The washer solvent shall be directed at each side window, each outside mirror, and the front cab glass by means of a minimum six (6) each dedicated nozzles. This is in addition to normal wet arm wiper systems.

5.10 Seats:

5.10.1 Driver's seat, medium or high-height back, premium, 6-way adjustable, air ride.

5.10.2 Passenger seat to be manufacturer's standard.

5.10.3 Seat upholstery to be fabric (cloth). Naugahyde or vinyl not acceptable.

5.10.4 Both seats to have seat belts and shoulder strap(s). Shoulder strap(s) may be three (3) point type.

5.11 Entry:

5.11.1 To have raised lug or expanded metal construction steps.

5.11.2 Grab handles to be provided to assist in entering or leaving cab, or gaining access to catwalk(s) around engine compartment (if so equipped).

5.11.3 For future reparability, door hinges shall not be welded to the cab frame or to the door.

5.11.4 For extended door life, door hinges shall extend the full height of the doors(s). Intermittent hinges are not acceptable.

5.11.5 Door stop webbing, minimum two (2) each, on each door, to prevent strong winds from "over opening" of doors.

5.12 Rear View Mirrors:

5.12.1 *METEGAL* or *RETRAC* or *MOTO MIRROR PLUS*, exterior rear view mirrors, heated, electrically powered (vertically and horizontally), combination including upper standard lens and lower convex lens, fully adjustable, 15x8 inches minimum. Mirrors to include stainless steel or painted steel brackets, at a minimum, with the mirror's body material being stainless steel or ABS type.

5.12.2 Electrical for heat to mirrors to include a dash mounted independent switch.

5.13 Steering wheel to be tilt and telescoping type.

5.14 Gauges/Indicators and Controls:

5.14.1 All gauges, indictors and controls mounted in the cab are to be within easy reach and view of the operator.

5.14.2 Hinged or front serviceable type with a full complement of gauges or indicators, as specified, including as a minimum:

1.1.1.1 Hour Meter (One for each engine): To include two (2) each *ENM* Model PT-12 LCD programmable engine hour meters, running engine activated. Meter is to be capable of displaying 99,999 hours.

ENM

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www.enmco.com

5.14.2.1 Audible and visual (red or yellow in color) warning system for low engine oil pressure and high engine coolant temperature (both engines).

5.14.2.2 Voltmeter or ammeter gauge (for each alternator, if applicable).

5.14.2.3 Air pressure with visual (red or yellow in color) and audible low air pressure warning (if air system is utilized).

5.14.2.4 Engine oil pressure gauge with warning (red or yellow in color) light (both engines, red or yellow in color).

5.14.2.5 Fuel gauge.

5.14.2.6 Engine coolant temperature gauge (both engines).

5.14.2.7 Tachometer (both engines).

5.14.2.8 Speedometer and odometer.

5.14.2.9 Transmission temperature warning light (red or yellow in color).

5.14.2.10 Hydrostatic fluid low-level warning light (if applicable, red or yellow in color).

5.14.2.11 Parking brake warning light (red or yellow in color).

5.14.2.12 Transfer case engagement lever/switch with ENGAGED (orange or green in color) indicator light.

5.14.2.13 CDL (Driver Controlled Differential Lock) ON/OFF switch with ENGAGED (orange or green in color) indicator light for the front drive axle.

5.14.2.14 DCDL (Driver Controlled Differential Lock) ON/OFF switch with ENGAGED (orange or green in color) indicator light for the rear drive axle.

5.14.2.15 Work light switches with ON (orange or green in color) indicator light.

5.14.3 All gauges to be lighted from behind.

5.14.4 All switch identifications are to be lighted.

5.14.5 All switches, gauges and controls to be properly identified.

5.14.5.1 *DYMO* type tape labels are not acceptable.

5.14.5.2 Stick-on type labels are not acceptable; however, labels with OEM part numbers that are parts manual listed are acceptable.

5.14.6 Toggle switches controlling electrical components to be metal (plastic is not acceptable). Rocker type switches may be plastic or metal.

5.14.7 Self-canceling turn signals with hazard switch.

5.15 Horn: Mounted on top or side of cab, with decibel rating of approximately 130. To be chrome and include snow shield.

5.16 Hydraulic hoses are not to enter the operator's cab.

6.0 BODY:

6.1 Engine Compartment(s):

6.1.1 Fully enclosed with easily removable access doors on left and right sides, or tilt hood, or hinged doors. Hinged doors are to be bolt-on (welded-on doors are not acceptable.

6.2 Shall provide adequate access to the top, left, and right sides, for maintenance.

6.2.1 Walkways to be of raised lug or expanded metal construction.

6.2.2 Walkways shall include minimum one (1) inch tubular, 42 inches in height, handrails or guardrails and be included for steps that access walkway.

6.3 Anti-Sail mud flaps, front and rear (if lower edge of fender is more than 23 inches from ground).

6.4 Steel fenders over front and rear wheels. Fenders to be fully undercoated.

6.5 Self-tapping bolts used in sheet metal construction are not acceptable.

6.6 Top access door, or tilting hood, or removable engine enclosure with lifting eyes (if possible) to accommodate engine removal.

7.0 POWER TRAIN – SNOW BLOWER:

7.1 (*) Engine: Diesel, water-cooled, four (4) cycle, electronically controlled, 15.0 liter minimum displacement, 525 SAE net horsepower minimum, 1770 pound foot torque minimum. Not to exceed 2,100 RPM. Engine to be capable of performance requirements cited in this specification.

Cat C15, 525 HP. Reference Oshkosh / Cat brochure in bid file.

7.2 **Optional, in lieu of 525 HP above:**

7.2.1 (*) Engine: Diesel, water-cooled, four (4) cycle, electronically controlled, 16.0 liter minimum displacement, 650 SAE net horsepower minimum, 1950 pound foot torque minimum. Not to exceed 2,300 RPM. Engine to be capable of performance requirements cited in this specification.

Cat C16 650 HP. Reference Oshkosh / Cat brochure in bid file.

7.3 Engine, General:

7.3.1 All engine controls, gauges and indicators will be carrier cab mounted and provide easy view and operation of by the operator. Refer to requirements in CAB section of this specification.

7.3.2 Governor will be of the correct type to control and limit engine speeds as recommended by the engine, driveline, and power train component manufacturers for its intended use in this vehicle.

7.3.3 To be equipped with electronic or air high idle circuit, to maintain approximately 1200 rpm (for warm-up purposes. Cable type control is not acceptable.

7.3.4 Engine shall meet current EPA off-highway emission requirements at time of delivery.

7.4 Engine Cooling System:

7.4.1 Permanent type antifreeze to minus 60 degrees Fahrenheit.

7.4.2 The radiator shall be a tube and fin type and be capable of maintaining the correct operating temperature under all conditions encountered without dependence on other systems to provide cooling. If cooling system incorporates the use of shutters or other method of diverting air to either the radiator or engine air intake, these systems shall operate consistent with the engine manufacturer's recommendations.

7.4.3 A coolant circulation bypass will be provided to allow coolant to circulate within the engine block while thermostat is closed.

7.4.4 Drain cocks will be provided at the low point of radiator and engine block.

7.4.5 Filtration: To be spin-on type.

7.4.6 Radiator to be mounted securely on vibration dampening mounts.

7.4.7 Hoses: *GATES* Bluestrip, or GATES Greenstripe, or silicone, to be provided on all radiator and heater hoses.

7.4.8 Clamps utilized on engine coolant lines one (1) inch inside diameter or larger are to be *CONSTANT-TORQUE* or equivalent, stainless steel.

7.4.9 Airflow through engine compartment will be such that compartment maintains a positive pressure to prevent compartment from becoming filled with dry snow or other contaminants.

7.4.10 To include a coolant level sight gauge, easily seen by maintenance personnel while checking engine oil level.

7.4.11 To include engine manufacturer's certification that the engine will maintain, but not exceed, a continuous operating temperature, as an operational unit, with a wide range of ambient temperatures to as low as minus 40 degrees Fahrenheit. *Certification to be provided not later than pilot inspection*.

7.5 Engine Cold Starting Aids:

7.5.1 Automatic electronic ether injection system, *KBI* Dieselmatic, *TURNER* Quick Start, or equivalent.

7.5.1.1 To be wired through starter button.

7.5.1.2 To include an engine sensor switch.

7.5.1.3 System to be installed in engine compartment and have maximum protection from the elements.

7.5.2 Engine Block Heater: Immersion type, maximum wattage available, 110 volt AC (OEM if available).

7.5.3 Engine oil pan heater, one (1) each, 300 watt, 110 volt AC, silicone pad heater bonded to oil pan, *BESCO*, *KAT'S, WATLO,* or equivalent.

7.6 Engine Intake Air System:

7.6.1 Must have two (2) stage (dual element) air cleaner(s).

7.6.2 Air filter restriction indicator, dash-mounted with audible alarm.

7.6.3 (*) Air intake may include a dual inside or outside system that will allow inside air intake when outside ambient temperature is 40 degrees Fahrenheit or below, or outside air intake when outside ambient temperature is above 40 degrees Fahrenheit. The process of changing from inside to outside or vice versa shall not require any tools. Time involved should not take more than five (5) minutes, even in the most extreme weather conditions. The *OSHKOSH* automatic system is acceptable.

Oshkosh automatic system with inside/outside air box that controls air intake for optimum amount of power out of engine.

7.6.3.1 If outside air, even with the *DONALDSON* system, the unit must include a *SURECO* Turbo II or *SURECO* Power Ram or *ENGINAIR* system.

7.7 Engine Exhaust System:

7.7.1 Exhaust system to be designed to prevent rain, snow, or slush from entering exhaust system.

7.7.2 Exhaust piping to be located away from cab and be heat shielded if vulnerable to maintenance personnel.

7.7.3 Horizontal exhaust piping shall be shielded to prevent spilled flammable fluids from contacting surface, where applicable.

7.7.4 Mufflers and tailpipe will be designed to minimize noise without causing excessive backpressure.

7.8 Engine Fuel System: Fuel will be drawn from same tank(s) as carrier.

7.9 Engine Oil Filtration: Oil filters to be spin-on type.

8.0 WEIGHT TRANSFER SYSTEM:

8.1 (*) To increase traction to the carrier and reduce wear and tear on caster wheels, the carrier is to be equipped with a weight transfer system, which, when set from

the operator's position, automatically maintains minimum 60% (sixty-percent) of the blower head weight to the chassis.

To provide weight transfer system automatic 60% of blower head on chassis.

8.1.1 This shall be accomplished hydraulically by sensing the system pressure and continually adjusting the pressure via electronically controlled hydraulic metering valves.

9.0 HYDROSTATIC SYSTEMS (SNOW BLOWER and WEIGHT TRANSFER SYSTEM):

9.1 For high-speed transport, hydraulics, powered by the carrier engine shall be able to lift the blower head assembly completely off the ground.

9.2 Weight transfer system hydraulics to be powered by the carrier engine.

9.3 Snow Blower:

9.3.1 (*) A variable displacement hydraulic pump that is driven by the auxiliary engine will supply hydraulics to the hydraulic motors.

Blower engine drives blower hydraulics.

9.3.2 (*) The first stage ribbon shall be driven from both right and left sides and be protected by hydrostatic reliefs and have full torque reverse capabilities.

First stage ribbon is driven from both sides with hydrostatic reliefs and full torque reverse capabilities.

9.4 Weight Transfer System:

9.4.1 (*) Hydraulics to be powered by carrier engine. Gear pump is acceptable.

Weight transfer hydraulics driven by carrier engine.

9.5 (*) Pumps: Direct driven, variable displacement piston. Engine driven auxiliary is acceptable. Belt or chain driven is not acceptable. To be *SAUER-DANFOSS* or *REXROTH*.

Provide engine driven, direct drive, variable displacement Sauer-Danfoss pump.

9.6 (*) Motors: To be *SAUER-DANFOSS* or *REXROTH*. Sauer-Danfoss motors.

9.7 Hydraulic Reservoir(s):

9.7.1 Designed for adequate cooling and shall be properly baffled.

9.7.1.1

9.7.2 Suction strainer, 100 mesh minimum, with sump area and provisions made for easy cleaning.

9.7.3 Sight gauge located above pump level.

9.7.4 Equipped with a filler neck with strainer and air vent.

9.7.5 Drain to be equipped with a ¼ (one-quarter) turn ball shut-off valve (easily accessed). An extension hose, or piping, may be required to allow draining of oil into a bucket or pan that would be positioned at ground

level. The ball valve, end of the hose, or piping would require a cap or plug.

9.8 Hydraulic Filtration:

9.8.1 Spin-on filter(s), with properly rated no flow restriction check valves installed to isolate filter(s) for servicing or filters to be located above the hydraulic tank to reduce oil loss during servicing.

9.8.2 Filtration to be in compliance with SAE J931.

9.9 To include hydraulic pump manufacturer's certification that the hydraulic system will maintain, but not exceed, a continuous operating temperature, as an operational unit, with a wide range of ambient temperatures to as low as minus 40 degrees Fahrenheit. *Certification to be provided not later than pilot inspection*.

10.0 SNOW BLOWER:

10.1 To be a heavy-duty two-stage system capable of producing 5,000 TPH (ton-per-hour). Refer to SNOW BLOWER PERFORMANCE SPECIFICATIONS later in this specification.

10.2 Drive System:

10.2.1 (*) To consist of a two (2) speed, pressure lubricated, full torque, drop box and a three (3) plate 14-inch diameter clutch, minimum.

Two speed pressure lubricated, full torque drop box with a 14" clutch.

10.2.1.1 Clutch is to be manual or power assist engagement from the cab.

10.2.2 Drive Lines: To be heavy-duty, compatible with torque ratings commensurate with the load imposed.

10.2.3 (*) Impeller drive shall be direct mechanical.

Impeller drive is direct mechanical.

10.2.4 (*) Ribbon drive shall be hydrostatic.

Ribbon drive is hydrostatic.

10.2.5 (*) Shear pins shall be located at the furthest point from drive mechanism so as to minimize damage to drive train components. The shear pins shall also incorporate replaceable shear pin bushings. Shear pins are to include a relief cut in the shear area (standard off the shelf bolts are not acceptable).

Shear pins are located at the output flange of the impeller drop box.
Shear pins have a relief cut in the shear area.

10.2.5.1 **SPARE** Shear Pins: To include 25 complete sets including bushings.

10.2.6 Hydrostatically driven components shall be protected by proper hydraulic relief circuits.

10.3 Snow Blower Head:

10.3.1 Ribbon (Reel) Configuration:

10.3.1.1 Diameter: Minimum 52 inches.

10.3.1.2 Ribbon type first stage is required to feed the second stage impeller. Two (2) stage design required, impeller and ribbon/auger to be independent components.

10.3.1.3 Power flow shall drive the ribbon from both left and right sides.

10.3.1.4 The ribbons (cutter blades) shall have serrated leading edges. They shall be in two (2) sections (minimum) per side for ease of replacement.

10.3.1.5 Ribbon to be a closed or open center design.

10.3.2 Impeller (fan) Configuration:

10.3.2.1 Diameter: Minimum 59 inches.

10.3.2.2 Fabricated construction. Cast is not acceptable.

10.3.2.3 Five (5) paddles minimum, individually replaceable, attached with countersunk fasteners (if fasteners are on the face of the paddle).

10.3.2.3.1 Shall be made of 1/2 (0.5) inch thick ductile iron or steel, or 1/4 (0.25) inch thick AR-360 steel.

10.3.2.4 Snow volute controllable from the cab, rotating through a minimum of 125 degree arc, left to right. Flat casting to be to the right.

10.3.2.5 Impeller housing shall be constructed with a removable liner for protection and friction reduction (poly type is not acceptable).

10.3.2.5.1 Housing liner to be 3/16 (0.1875) inch thick AR-360 steel.

10.3.3 Caster Wheels:

10.3.3.1 To include, minimum of two (2) each, 360 degree swiveling, minimum 10-inch diameter x minimum five (5) inch wide, steel caster or foam filled wheels. Vulcanized rubber on steel is not acceptable.

10.3.3.2 The caster wheels shall be capable of supporting the entire weight of head.

10.3.3.3 To include a screw type adjustment for adjusting the height.

10.3.4 Skid Shoes:

10.3.4.1 In addition to the caster wheels, the rotary head shall have adjustable **carbide** skid shoes located at each side of the rotary head, behind the cutting edge inside the width of the rotary head.

10.3.4.2 To include a screw type adjustment for adjusting the height.

10.3.5 For high-speed transport, hydraulics, powered by the carrier engine shall be able to lift the blower head assembly completely off the ground.

10.4 **Spot Casting/Loading Chute *(OPTIONAL)*:**

10.4.1 A fixed (one piece), heavy-duty, mounted spot casting/loading chute shall be supplied, such that the impeller discharge may bypass the chute and discharge (flat cast) to the right and maintain the minimum 125 degree arc as specified above.

10.4.2 The chute shall rotate minimum 180 degrees with a hydraulic motor, chain driven, and heavy-duty bearing system (wire or cable is not acceptable).

10.4.3 All chute functions to be operated utilizing electrical over hydraulic control valves.

10.4.4 Hydraulics to utilize main carrier hydraulic system (a separate electric pump is not acceptable).

10.4.5 The directional control chute to be equipped with a hydraulic operated deflector flap, capable of discharging the snow from 65 degrees from vertical to a 40 degree downward angle for precision spot casting or loading trucks.

10.4.6 Liner:

10.4.6.1 The inside back of the chute to be lined with ½ (0.5) inch thick *TYVAR 88* or *TYVAR* 88 equivalent, or 3/16 (0.188) inch thick AR-360 steel (full length, but not including deflector flap).

10.4.6.2 The liner is to be bolted in, using stainless steel, aircraft style, flat head, 1/4 (0.25) inch diameter minimum, flat head socket cap screws with countersunk washers, providing a flush surface. To be on 12 inch centers, minimum.

10.4.7 Height:

10.4.7.1 (*) Overall: Top of chute must not exceed 162 inches from ground level in the operating position, head in float. 162 inches.

10.4.7.2 Unit to be capable of easily loading into 12 to 20 cubic yard dump trucks with up to nine (9) foot high side boards with a minimum distance of four (4) foot away from the right or left side of the snow blower head.

11.0 DIMENSIONS:

11.1 (*) Overall height (not including spot casting/loading chute), 144 inches (12 foot), maximum. Highest point may be exhaust.

141 inches overall height with strobe light.

11.1.1 Also refer to Spot Casting/Loading Chute height limitation.

11.2 (*) Overall transport width, 102 inches (8 foot 6 inches) maximum.

102 inches transport width

11.3 (*) Overall length, 497 inches (41 foot 5 inches) maximum.

36 feet overall length with blower head

11.4 (*) Turning diameter, outside wall to wall, utilizing 4-wheel steer, 65 feet maximum.

48.5 feet wall to wall turning radius without spotcast loading chute and with standard rear bumper, 46.5 feet spotcast loading chute and ballast type rear bumper.

12.0 WEIGHT AND BALANCE:

12.1 (*) Balance: Unit must be able to stop transversely on a 30 percent grade with no danger of overturning. This requirement must be certified by factory and submitted with bid. Complies, reference certification in bid file.

12.2 (*) Gross Weight: With snow blower and spot cast/loading chute in carry/transport position. 37,000# w/o spotcast loading chute,39,000# w/spotcast loading chute.

13.0 TRAINING *(OPTIONAL)*:

13.1 The vendor shall provide a factory certified instructor(s) within 30 days of acceptance by the State. This (these) representative(s) shall be prepared and qualified to make all necessary adjustments to the unit and give instruction to the operators to assure correct operation of the unit when it is placed in service.

13.1.1 Please give advance notice to the appropriate State Equipment District Manager..

13.2 Total of 16 hours at the location as noted in each individual Lot Item, Section V – Bid Price Schedule.

13.3 To include a minimum of eight (8) hours of operator training including the following, as a minimum applicable agenda:

13.3.1 Operating procedures per operating manual.

13.3.2 Break-in procedures.

13.3.3 Equipment limitations.

13.3.4 Operator maintenance.

13.3.5 Before operations checks and lubrication.

13.3.6 Safety.

13.3.7 Cold weather operations.

13.3.8 Jump starting.

13.3.9 Welding on equipment.

13.3.10 Towing or transporting equipment.

13.3.11 Instruments and controls.

13.3.12 Gauge interpretation.

13.3.13 Equipment operation, Do's and Don'ts.

13.3.14 Attachment operation, Do's and Don'ts.

13.4 To include a minimum of eight (8) hours of mechanics (Journeyman level) training including the following theory, trouble shooting, and test procedures for, as a minimum applicable agenda:

13.4.1 Electronics.

13.4.2 Electrical.

13.4.3 Hydraulics.

13.4.4 Air system.

13.4.5 Drive train.

13.4.6 Engine and transmission electronics.

14.0 MISCELLANEOUS:

14.1 Weight Scale Verification Slips:

14.1.1 Required not later than time of delivery.

14.1.2 Separate weight on the carrier's front tires with the snow blower in transport position.

14.1.3 Separate weight on the carrier's rear tires with the snow blower in transport position.

14.1.4 Separate weight on the carrier's rear tires with the snow blower in working position.

14.1.5 Also refer to Section II – Special Terms and Conditions.

14.2 Paint:

14.2.1 Lead free.

14.2.2 Color to be manufacturer's standard yellow.

14.2.3 To include sandblasting and three (3) mils of appropriate primer, including frame and wheels.

14.2.4 Metal portions of snow blower (including casting shoot, if ordered) facing the operator shall be flat black to minimize glare.

14.2.5 The inside of the engine housing is to be painted a gloss yellow or white.

1.2 Easy access to all maintenance components shall be provided for items such as air cleaners, batteries, radiator fill and drain, oil filters, oil drain (hydraulic and engine), generator, etc.

1.2.1 To assist maintenance personnel, oil drains for engine and hydraulic may require a remote mounted hose with an easily accessed ¼-turn ball valve at the outlet and a cap or plug at the exit point.

1.3 Winterization: Entire unit to be winterized to provide satisfactory performance in temperatures to minus 40 degrees Fahrenheit. Antifreeze to be of permanent type only providing protection to minus 60 degrees Fahrenheit.

14.3 Fire Extinguishers:

14.3.1 To have two (2) each five (5) pound Halotron, or equivalent, units easily accessible to operator. One (1) in cab, and one (1) exterior of cab.

14.3.2 Mounting location will be determined at time of pilot inspection.

1.4 Warranty: To be a three-year (36 month), full 100 percent, per Section III - Special Terms and Conditions.

1.5 **Publications (*OPTIONAL*)**:

1.5.1 The contractor may be required to supply samples of parts and service manuals after bid opening.

1.5.2 Refer to Section II – Special Terms and Conditions for further requirements.

14.4 Hydraulic tubes, hoses and fittings used shall conform to SAE J514, J516, J517 and J524. A minimum number of fittings, joints and connections shall be used to prevent excessive backpressure, vibration and leakage. Hydraulic lines shall be of sufficient size to permit free flow of hydraulic fluid at temperatures down to minus 40 degrees Fahrenheit.

14.4.1 (*) A letter of certification/approval from the manufacturer of the hydrostatic drive system components for chassis and rotary head shall be included in the bid package. Reference letter in bid file.

14.5 Filters: All elements where applicable to be spin on type and be easily accessible.

14.6 Component Sourcing:

14.6.1 Due to critical nature of vehicle mission and parts support, only current production componentry shall be supplied.

14.6.2 (*) The contractor shall provide assurance that only unused, newly manufactured components are supplied. Reference letter in bid file.

14.6.3 (*) The contractor and/or vehicle manufacturer shall certify that the engine(s), automatic transmission(s), transfer case, and axles to be supplied will be newly manufactured and purchased directly from the original component manufacturer or their authorized OEM distributor.

Reference letter in bid file.

14.6.4 Upon the request of the purchaser, the contractor shall provide copies of purchase orders and invoices properly dated after bid award to verify the source and newness of these components.

14.6.5 Purchase orders and invoices shall reference the component manufacturer, manufacturer's model and/or part number, and the contractor and/or vehicle manufacturer's name and part number.

14.6.6 In the event any of these components are manufactured by either the contractor or vehicle manufacturer, documentation shall be provided indicating manufacture date and chassis installation date by serial number.

14.6.7 Failure to provide appropriate documentation of component sourcing shall be considered cause for rejecting the delivered vehicle. The burden of proof shall lay with the contractor.

14.7 Manufacturer/supplier stability:

14.7.1 (*) In the interest of continued and reliable service, parts, and technical support, equipment suppliers shall provide, a users list of model being bid that have been delivered, as new, within the past two (2) years. This users list is to include the following current information on a minimum of five (5) units: **See customer list in bid file.**

14.7.1.1 **No. 1 – Model and serial number.**

14.7.1.2 No. 1 - Date delivered.

14.7.1.3 No. 1 - Company or agency name.

14.7.1.4 No. 1 - Address.

14.7.1.5 No. 1 - Contact name.

14.7.1.6 No. 1 - Phone number.

14.7.1.7 **No. 2 – Model and serial number.**

14.7.1.8 No. 2 - Date delivered.

14.7.1.9 No. 2 - Company or agency name.

14.7.1.10 No. 2 - Address.

14.7.1.11 No. 2 - Contact name.

14.7.1.12 No. 2 - Phone number.

14.7.1.13 **No. 3 – Model and serial number.**

14.7.1.14 No. 3 - Date delivered.

14.7.1.15 No. 3 - Company or agency name.

14.7.1.16 No. 3 - Contact name.

14.7.1.17 No. 3 Phone number.

14.7.1.18 **No. 4 – Model and serial number.**

14.7.1.19 No. 4 - Date delivered.

14.7.1.20 No. 4 - Company, or agency name.

14.7.1.21 No. 4 - Address.

14.7.1.22 No. 4 - Contact name.

14.7.1.23 No. 4 - Phone number.

14.7.1.24 **No. 5 – Model and serial number.**

14.7.1.25 No. 5 - Date delivered.

14.7.1.26 No. 5 - Company, or agency name.

14.7.1.27 No. 5 - Address.

14.7.1.28 No. 5 - Contact name.

14.7.1.29 No. 5 - Phone number.

14.8 (*) The contractor will be required to post a performance bond prior to award, per Section II - Special Terms and Conditions. Reference bond on file.

14.9 (*) Have documentation provided to verify such continuous business activity, such as location and contact lists, financial statements, and annual reports. Reference contract list and financial information in bid file.

14.10 Local Support:

14.10.1 (*) Because of the critical nature of use for this equipment, service and technical support are considered an integral part of its purchase. Therefore, all contractors must be authorized dealers of the vehicle proposed, with service facilities in Anchorage and Fairbanks at a minimum.

Reference letter in bid file.

14.10.2 The local service facilities must be capable of servicing the entire unit including the chassis, and any auxiliary equipment provided thereon.

14.10.3 (*) The contractor must include verification that the local maintenance facility and staff is factory trained to provide the service and technical support, and have experience on similar units.

Reference letter and certificate of training for Anchorage in bid file.

14.10.4 Prior to award, the State reserves the right to inspect the contractor's local maintenance facility and request documentation on training and experience.

15.0 PERFORMANCE TESTING (SNOW BLOWER):

15.1 Testing Requirements:

15.1.1 Tests may be conducted to pre-qualify unit's capability to meet performance requirements.

15.1.2 Performance testing may be conducted in accordance with the procedures and requirements of this section.

15.2 Performance Requirements:

15.2.1 Capacity:

15.2.1.1 The minimum **525 HP** blower engine version is to produce a minimum **4,000 TPH** while casting to 50 feet, minimum. When operating in snow having a density between 30 and 40 pounds per cubic foot (PCF), the snow removal unit shall cast snow at an average required tons per hour (TPH) through a distance of not less than 50 feet, and at 75 percent required TPH capacity through a distance of not less than 75 feet.

15.2.1.2 The minimum **650 HP** blower engine version is to produce a minimum **5,000 TPH** while casting to 50 feet, minimum. When operating in snow having a density between 30 and 40 pounds

per cubic foot (PCF), the snow removal unit shall cast snow at an average required tons per hour (TPH) through a distance of not less than 50 feet, and at 75 percent required TPH capacity through a distance of not less than 75 feet.

15.2.2 Casting:

15.2.2.1 Variable casting from 20 to 75 feet. Casting performance shall be attained under a no wind condition, both left and right of unit.

15.2.3 Clearing:

15.2.3.1 The snow removal unit shall clear a swath of not less than eight (8) foot wide in one (1) pass, while operating in snow ranging in depth from 1½ (1.5) inches to four (4) feet, not leaving any snow more than ½ (0.5) inch deep under head.

15.2.3.2 Unit traveling at designated MPH (refer to next paragraph) will leave no spillage of snow greater than ½ (0.5) inch in depth under the head of unit or greater than average ½ (0.5) inch in depth, and/or 18 inches in width to the left or right sides of unit when blowing a berm of snow. Casting to a minimum of 50 feet; snow density, 30 to 40 PCF. Refer to test procedure on Clearing Test Procedure later in this specification.

15.2.3.3 Required machine travel speed will be adjusted to compensate for density and cross section quantity so as not to exceed the required TPH capacity.

15.2.4 Speed and Gradeability:

15.2.4.1 (*) The fully equipped snow removal unit, loaded to rated GVW and with snow blower head in transport position, shall be capable of maintaining a continuous forward speed of not less than 45 MPH on dry level pavement and negotiating a five (5) percent dry, smooth, paved grade at 40 MPH.

Reference SCANN in bid file.

15.3 Snow blower Testing Procedures:

15.3.1 Purpose:

15.3.1.1 The purpose of these testing procedures is to determine the actual snow removal capacity, clearing capabilities, and casting distance of different makes and models of rotary snow blowers. These tests also provide a basis for determining the length of time required to complete a given snow removal task.

15.3.2 The snow blower should be at the manufacturer's recommended operating temperature and the operator should be totally familiar with the snow blower and be advised of the operating procedure to be used for the specific test.

15.3.3 Test Measurements:

15.3.3.1 Windrows should be measured for cross-sectional area at 100-foot intervals, and at the beginning and end of the test run. Each test run should be 500 feet.

15.3.3.2 Snow density tests should be taken at all locations where the cross-sectional measurements are taken. Three (3) samples of snow should be taken at each location with a soil conservation service-coring tool the full depth of the snow berm. Average the three (3) densities obtained from these samples.

15.3.3.3 Measure the ambient temperature.

15.3.3.4 Measure the shear strength. The average shear strength should be measured with a *RAMSONDE* Penetrometer for the full depth of the windrow.

15.3.3.5 To determine the casting distance, measure the distance from the longitudinal centerline of the snow removal unit to the center of mass within the perimeter of the cast pattern.

15.3.3.6 Snow condition:

15.3.3.6.1 For a valid test, the average snow density is to be between 30 and 40 PCF (pounds per cubic foot).

15.3.4 Capacity Test Run:

15.3.4.1 The snow blower should be run over the prescribed course in accordance with the manufacturer's recommended procedure for obtaining the maximum capacity for the prescribed casting distance. A series of three (3) test runs should be performed and the capacity and casting distance for each run averaged.

15.3.4.2 Site Preparation:

15.3.4.2.1 Select a suitable site, preferably flat with a paved surface. Construct a windrow of snow with the following approximate dimensions:

Width (base) = seven (7) feet

Depth (height) = three (3) feet

Length = 500 feet

15.3.4.3 Capacity Calculation:

15.3.4.3.1 The capacity of the snow blower is calculated by using the following formula:

Q = A x L x D x 1.8/t; where Q = capacity

A = average cross-sectional area of the windrow

L = length of test run

D = average density of the snow

t = time of test run measured in seconds

1.8 = a constant

hour = 3,600 seconds

ton = 2,000 pounds

15.3.4.3.2 Allowances should be given for capacity determinations as the shear strength of the snow exceeds 125 pounds per square foot (PSF). Such allowance will not exceed 50 percent, and will be based on a straight line (linear) reduction scale between 125 PSF and 600 PSF. No allowance will be given below 125 PSF, and shear strengths greater than 600 PSF will void the test.

15.3.4.3.3 Capacity reduction allowance for shear will be calculated according to the following formula:

average shear - 125 PSF = percentage of reduced capacity allowed

15.3.4.3.4 Where 9.5 is a constant, representing the ratio of the spread of shear range (600 PSF minus 125 PSF = 475) and the capacity reduction allowance spread (100% minus 50% = 50%), where 475 divided by 50 = 9.5.

15.3.4.4 Any portion of the test windrow left by the snow blower will be measured. The quantity will be subtracted from the original cross-sectioned volume for determining total volume of snow blown in the capacity test run.

15.3.4.4.1 **Note:** These spillage measurements should be taken at the same location as the windrow cross sections.

15.3.5 Clearing Test Procedures:

15.3.5.1 The following test is to be performed to determine the snow blower's ability to clear snow at 75 percent rated capacity without leaving spillage under or to the side of the snow blower head.

15.3.5.2 The snow blower should be run over the prescribed course in accordance with the manufacturer's recommended procedure for obtaining maximum clearing efficiency for the designated speed required to achieve 75 percent capacity.

15.3.5.3 Construct a berm of snow having the following approximate dimensions:

Length = 500 feet

Width = three (3) feet

Depth = two (2) feet

15.3.5.4 Required machine travel speed will be adjusted to compensate for density and cross section quantity so as not to exceed the required ton per hour at 75 percent capacity.

15.3.5.5 The speed of the clearing run will be determined by stopwatch.

15.3.5.6 A single clearing run which leaves no spillage will qualify a machine. Spillage is defined as more than 1/2" (one-half inch) of snow remaining under the head of the unit and/or snow remaining to the left or right sides of the unit, excluding isolated lumps of snow cast to the side due to speed.

16.0 INSPECTIONS:

16.1 Prior to shipment from the manufacturer's plant, representatives of the State will inspect the **completed unit** for conformance to specifications. The completed unit, component equipment, and accessories shall be inspected and/or tested by the **contractor** for compliance with specifications, **PRIOR** to the arrival of the State inspection team. The State reserves the right to appoint an independent inspector at the State's expense to periodically monitor the progression of the unit during the manufacturing process.

16.1.1 The contractor is to provide the State with a minimum 30 days notice prior to the pilot inspection.

16.2 Prior to the arrival of the State inspection team, **a completed pilot unit**, component equipment, and accessories shall be inspected and/or tested by the contractor for compliance with specifications.

16.3 The contractor shall provide full access to the State inspection team.

16.4 These inspections by the State shall be thorough and very critical, and will encompass a complete review of the specifications. Adequate time and technical personnel shall be made available to assist the State in these inspections.

16.5 The contractor (responsible sales rep) shall also be in attendance.

16.6 Inspection trip costs. The contractor will supply round trip coach ("Y") airfare (not supersaver), with open arrival and departure times, for two (2) inspectors to the manufacturer's facility. Both inspectors will depart from **ANCHORAGE**.

16.6.1 Per diem for each of the two (2) inspectors shall be at a rate of US$120.00 per day each. It is expected that there will be four (4) days (travel day, inspection days, and return travel day).

16.6.2 The contractor shall assist by booking lodging reservations. Meals and lodging will be paid by the State inspectors.

16.6.3 Arrange and provide all ground transportation necessary to conduct the inspection for the State inspection team.

16.7 While the State recognizes contractual responsibility in testing, the State reserves the exclusive right to reduce the number of inspectors when and if that action seems prudent. If the number of inspectors is reduced, the contractor will return to the State all monies saved by that action within thirty (30) days following the actual inspection.

16.8 It shall be the responsibility of the State inspection team to technically inspect and test the unit for compliance with the specifications.

16.9 It shall be the responsibility of the Contracting Authority Representative to observe the inspection and test to assure compliance with the published terms, conditions, and specifications of the contract, and to mediate any disputes, which may arise between the contractor and the Department of Transportation's representatives.

16.10 FINAL ACCEPTANCE REMINDER: Final acceptance is at final destination; however, all major tests will be conducted at the contractor's place of business unless the State has reason to believe alterations or damages have taken place which may have changed the performance or design characteristics of the unit since the time of inspection at the contractor's location.

16.11 A final inspection of the unit will be conducted at FOB point to assure that the unit still meets specifications.

16.11.1 Should the State determine that it is necessary to have the representative of the Contracting Authority attend the delivery inspection due to numerous specification discrepancies that were not corrected per the Pilot Inspection Report, or the vendor requests the representative of the Contracting Authority to attend the delivery inspection, the vendor shall pay round trip coach airfare (not supersaver) from Anchorage to the assigned location and per diem at $120.00 per day.

END OF SPECIFICATION #757-5K